

Application No. 09/872,581
Response to OA of 01/09/2006

Remarks

In the present response, two claims (1 and 2) are amended; and two claims (25 and 26) are newly added. Claims 1-2 and 4-26 are presented for examination. No new matter is presented.

I. Claim Rejections: 35 USC § 112

Claims 1-2 and 4-20 are rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner argues that "nowhere in the specification suggests or teaches to determine the number of nodes to be activated based on the number of elements in a vector nor based on a size of a vector" (see OA at p. 2). Applicants respectfully disagree.

In computer science, discussion about size or elements of vectors is very well known to one skilled in the art. Figure 3 in Applicants' specification clearly shows that activation of node instances depends on a size or number of elements of a vector. As shown in Figure 3, a determination is made at block 350 as to whether activation of the multimode is by resource or variable.

Webopedia (www.webopedia.com) is an online dictionary dedicated to computer technology. Webopedia discusses "variable" as:

Variables play an important role in computer programming because they enable programmers to write flexible programs. Rather than entering data directly into a program, a programmer can use variables to represent the data. Then, when the program is executed, the variables are replaced with real data. This makes it possible for the same program to process different sets of data.

Every variable has a name, called the *variable name*, and a data type. A variable's data type indicates what sort of value the variable represents, such as whether it is an integer, a floating-point number, or a character.

Application No. 09/872,581
Response to OA of 01/09/2006

Applicants' Figure 3 expressly shows that when activation is by "variable," a variable name V is read (see block 370). The variable V is a type vector (see block 370). According to Webopedia, a vector in computer programming means an array which is defined as:

In programming, a series of objects all of which are the same size and type. Each object in an array is called an *array element*. For example, you could have an array of integers or an array of characters or an array of anything that has a defined data type. The important characteristics of an array are:

- Each element has the same data type (although they may have different values).
- The entire array is stored contiguously in memory (that is, there are no gaps between elements).

Arrays can have more than one dimension. A one-dimensional array is called a *vector*; a two-dimensional array is called a *matrix*.

Applicant's specification uses the terms "variable" and "vector" in accordance with their known definitions to one of ordinary skill in the art. Specifically, Applicants' specification in conjunction with Figure 3 discusses in detail how a variable is used to activate multiple instances of the nodes based on a number of elements in the vector V:

In step 370, the workflow engine 110 reads the variable name V. The variable name V can be, for example, of type vector or list. In step 374, the workflow engine 110 starts a new instance of the service node as specified in the SERVICE_NODE tag of the multi-service description. The value contained in the position i of vector V is passed as an input parameter to the service node.

In decision block 378, a determination is made whether there are more elements in vector V to be processed. In other words, the

Application No. 09/872,581
Response to OA of 01/09/2006

decision block determines whether all elements in vector V have been processed. When all elements in vector V have been processed, the processing ends. When there are more elements to be processed, processing proceeds to step 374. It is noted that steps 374 and 378 are repeated for each element i in vector V. (See page 16, lines 6-20 of specification).

In light of the express teaching of Applicants' specification, Applicants' Figure 3, and knowledge of one of ordinary skill in the art, Applicants respectfully request withdrawal of this rejection.

II. Claim Rejections: 35 USC § 112

Claims 1-2 and 4-20 are rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. The Examiner argues that the specification does not teach or suggest how to determine the number of nodes to be activated based on a number of elements in a vector or based on a size of a vector. Applicants respectfully disagree.

Applicants respectfully ask the Examiner to review Figure 3 and the accompanying description in the specification. As one example, Applicants' specification states:

In decision block 378, a determination is made whether there are more elements in vector V to be processed. In other words, the decision block determines whether all elements in vector V have been processed. When all elements in vector V have been processed, the processing ends. When there are more elements to be processed, processing proceeds to step 374. It is noted that steps 374 and 378 are repeated for each element i in vector V. (See page 16, lines 13-20 of specification).

Application No. 09/872,581
Response to OA of 01/09/2006

In light of the express teaching of Applicants' specification, Applicants' Figure 3, and knowledge of one of ordinary skill in the art, Applicants respectfully request withdrawal of this rejection.

III. Claim Rejections: 35 USC § 112

Claims 1-2 and 4-20 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Specifically, the Examiner argues that claims 1 and 12 omit structural cooperation between the activation rule and elements in a vector. Applicants respectfully disagree.

First, neither claim 1 nor claim 12 recites the element "activation rule." Applicants respectfully ask the Examiner to cite case law stating that such an element must be cited in the claims.

Second, the test for definiteness under 35 U.S.C. 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986); see MPEP § 2173.02. Applicants specification in conjunction with Figure 3 clearly teaches how multiple parallel instances of a same work node are activated based on a number of elements in a vector (see Applicants' specification at p. 16, lines 6-20).

Third, in reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000); see also *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1366, 71 USPQ2d 1081, 1089 (Fed. Cir. 2004) ("The requirement to 'distinctly' claim means that the claim must have a meaning discernible to one of ordinary skill in the art when construed according to correct principles. Only when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction must a court declare it indefinite.").

Application No. 09/872,581
Response to OA of 01/09/2006

Therefore, Applicants respectfully ask the Examiner to navigate to www.webopedia.com for dictionary definitions of such terms as "vector" and "variable." Knowledge of one of ordinary skill in the art coupled with a reading of Applicants' specification and figures clearly apprises one of ordinary skill in the art of the scope of the claims.

Fourth, the Examiner is also reminded not to equate breadth of a claim with indefiniteness. *In re Miller*, 441 F.2d 689, 169 U.S.P.Q 597 (CCPA 1971). The Examiner cannot require the element "activation rule" to be added to claims 1 and 12 merely because these claims are broad.

In light of the express teaching of Applicants' specification, knowledge of one of ordinary skill in the art, and current case law, Applicants respectfully request withdrawal of this rejection.

IV. Claim Rejections: 35 USC § 103

Claim 21 is rejected under 35 USC § 103 as being unpatentable over USPN 6,041,306 (hereinafter Du) in view of Applicant Admitted Prior Art (AAPA). This rejection is traversed.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. *See M.P.E.P.* § 2143. Applicants assert that the rejection does not satisfy these criteria.

Claim 21 recites numerous recitations that are not taught or suggested in Du in view of AAPA. By way of example, claim 21 recites "determining, based on an activation rule, whether the activation of the multiple parallel instances of the same work node is a resource-based activation or a variable-based activation" (emphasis added). The Office Action cites Du at column 2, lines 22-51 and column 6, lines 1-6. Applicants respectfully disagree.

Column 2, lines 22-51 in Du discusses a resource manager in a WPPM and a need for a flexible WPPM that dynamically redefines the relationship with the resource

Application No. 09/872,581
Response to OA of 01/09/2006

managers. Notice, nowhere does this section of Du teach or suggest that multiple instances of the same work node are activated based on either resource-based activation or variable-based activation. **Du is completely silent on variable-based activation.**

Column 6, lines 1-6 in Du teaches a workflow management interface that allocates resources to a task according to "availability of the resources using the workflow management modules." Notice, nowhere does this section of Du teach or suggest that multiple instances of the same work node are activated based on either resource-based activation or variable-based activation. **Du is completely silent on variable-based activation.**

Further, AAPA states that "the number of activities that are executed in parallel is always equal to the number of resources that are available for execution of that activity" (emphasis added: p. 5, lines 10-13). Notice, nowhere does AAPA teach or suggest that multiple instances of the same work node are activated based on either resource-based activation or variable-based activation. **AAPA is completely silent on variable-based activation.** Further, AAPA expressly teaches away from variable-based activation since AAPA states that the number of activities being executed is always equal to available resources.

For at least these reasons, claim 21 and its dependent claims are allowable over Du in view of AAPA.

V. Claim Rejections: 35 USC § 103

Claims 22-24 are rejected under 35 USC § 103 as being unpatentable over USPN 6,041,306 (hereinafter Du) in view of Applicant Admitted Prior Art (AAPA) and US 2002/0083166 (hereinafter Dugan). Applicants respectfully traverse.

As noted above in section IV, Du and AAPA do not teach or suggest all the limitations of independent claim 21. Dugan does not cure the deficiencies of Du and AAPA. Thus, for at least the reasons given above in connection with independent claim 21, dependent claims 22-24 are allowable over Du and AAPA in view of Dugan.

Application No. 09/872,581
Response to OA of 01/09/2006

VI. New Claims

Applicants add new claims 25-26. These claims have numerous recitations that are not taught or suggested in the art of record. For example, claim 25 recites:

reading an activation rule to determine if activation of the multimode is based on **resource-based activation or variable-based activation**; and

activating the multimode to execute a number of plural instances of the same work node, wherein (1) the number equals resources available for executing the workflow when the activation rule is the resource-based activation or (2) the number is read from a variable name that is a vector when the activation rule is the variable-based activation (emphasis added).

The art of record at least does not teach or suggest the highlighted portions of claim 25. For at least these reasons, claims 25-26 are allowable over the art of record.

Application No. 09/872,581
Response to OA of 01/09/2006

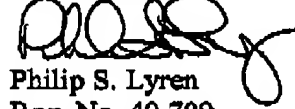
CONCLUSION

In view of the above, Applicants believe all pending claims are in condition for allowance. Allowance of these claims is respectfully requested.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. (832) 236-5529. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

Respectfully submitted,



Philip S. Lyren
Reg. No. 40,709
Ph: 832-236-5529

CERTIFICATE UNDER 37 C.F.R. 1.8

The undersigned hereby certifies that this paper or papers, as described herein, is being transmitted to the United States Patent and Trademark Office facsimile number 571-273-8300 on this 5th day of April, 2006.

By 
Name: Carrie McKerley